

Notice of Allowability

Application No.

09/823,084

Examiner

Yogesh C. Garg

Applicant(s)

THOMAS ET AL.

Art Unit

3625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Telephone Interview 7/16/2007 & Response filed on 5/9/2007.
2. ☒ The allowed claim(s) is/are 1,3,4,6-17,19 and 20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 7/16/2007.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


YOGESH C. GARG
PRIMARY EXAMINER

DETAILED ACTION

Response to Amendment

1. Applicant's amendment received on 5/9/2007 is acknowledged and entered. Claims 1, 6, 13 and 17 are amended and claim 5 is cancelled.

Response to Arguments

2. Applicant's arguments, see Remarks (pages 6-7), filed 5/9/2007, with respect to amended claim 1 have been fully considered and are persuasive. The applicant's representative Mr. Joseph Lutz, in a telephone interview on 7/16/2007 agreed for the following Examiner's Amendment to place the application in condition for allowance.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Joseph Lutz on 7/16/2007.

The application has been amended as follows:

1. (Currently Amended) A method within a communications network, comprising:

registering, by a service provider, an Internet service with a broker;

transmitting, by the service provider, metadata, to the broker, describing at least one communication proxy, including at least one supported protocol, a type, and a location of the communication proxy, the communication proxy provided by the service provider to enable client-access to the registered Internet service;

matching the registered Internet service with a client request to locate a client-desired Internet service having a client-specified communication proxy type and a client-specified application-level protocol;

downloading the communication proxy of the registered Internet service from the location to a node local to a client that issued the client request to the broker; and

accessing, by the communication proxy, a web server of the service provider to provide the registered Internet service to the a client if ~~the~~ a type of the communication proxy matches tithe client-specified communication proxy type ~~specified by the client~~ and a supported protocol of the communication proxy matches ~~an~~ the client-specified application-level protocol-specified by the client.

2. (Cancelled)

3. (Previously Presented) The method as in claim 1, wherein the type of the communication proxy is one of Java, common language runtime (CLR), component object model (COM), and Win32 binaries.

4. (Previously Presented) The method as in claim 1, wherein the at least one supported protocol of the communication proxy includes at least one of hypertext transfer protocol (HTTP), simple mail transfer protocol (SMTP), simple object access protocol (SOAP), secure sockets layer (SSUHTTPS), and secure HTTP (S-HTTP).

5. (Cancelled)

6. (Currently Amended) A method within a communications network comprising:

requesting a desired Internet service, by a client, to a broker, the client request including a desired communication proxy type and a desired application-level protocol;

receiving metadata from the broker regarding a communication proxy if the broker matches the client request within an Internet service registration, the communication proxy having at least a matching communication proxy type to the desired communication proxy type and a supported protocol of the communication proxy matches the application-level protocol specified by the client, the communication proxy provided by a service provider that registered of the desired Internet service with the broker

downloading, by the client, the communication proxy from a location specified by the metadata; and

interacting with a web server of the service provider using the downloaded communication proxy to receive the desired Internet service.

7. (Previously Presented) The method as in claim 6, wherein the communication proxy supports the desired application-level protocol.

8. (Previously Presented) The method as in claim 6, wherein interacting further comprises:

remotely accessing the web server by the downloaded communication proxy according to the client.

9. (Original) The method as in claim 6, wherein interacting comprises: dynamic interacting.

10. (Original) The method as in claim 6, wherein receiving metadata comprises: obtaining one of extensible markup language (XML), hyper text markup language (html), text file, and binary.

11. (Previously Presented) The method as in claim 6, wherein the desired communication proxy type is one of Java, common language runtime (CLR), component object model (COM), and Win32 binaries.

12. (Previously Presented) The method as in claim 6, wherein the desired application-level protocol is one of hypertext transfer protocol (HTTP), simple mail transfer protocol (SMTP), simple object access protocol (SOAP), secure sockets layer (SSL/HTTPS), and secure HTTP (S-HTTP).

13. (Currently Amended) A method within a communications network comprising: receiving at least one Internet service registration that includes metadata regarding at least one communication proxy;

receiving, from a client, a request to locate a client-desired Internet service having a client-specified communication proxy type and a desired application-level protocol;

matching the request with an Internet service registration to identify a communication proxy of the communication proxy type and a supported protocol of the communication proxy matches the desired application-level protocol specified by the client, the communication proxy provided by a service provider of the desired Internet service; and

transmitting metadata to the client, the metadata including at least a location of the identified communication proxy, the identified communication proxy to enable client-access to a web server of the service provider to receive the client-desired Internet service;

downloading the communication proxy from the location to a node local to the client; and

accessing, by the communication proxy, a web server of the service provider to provide the Internet service to a client.

14. (Previously Presented) The method as in claim 13, wherein receiving said metadata comprises:

obtaining descriptions of at least one supported protocol, a type, and a location of the communication proxy.

15. (Original) The method as in claim 13, wherein receiving said metadata comprises:

obtaining one of extensible markup language (XML), hypertext markup language (html), text file, and binary.

16. (Previously Presented) The method as in claim 14, wherein the communication proxy type is at least one of Java, common language runtime (CLR), component object model (COM), and Win32 binaries; and wherein a supported protocol of the communication proxy includes at least one of hypertext transfer protocol (HTTP), simple mail transfer protocol (SMTP), simple object access protocol (SOAP), secure sockets layer (SSL/HTTPS), and secure HTTP (S-HTTP).

17. (Currently Amended) A machine readable medium having instructions which when executed by a machine cause said machine to perform ~~operations~~ a method within a communications network comprising:

requesting a desired Internet service, by a client, to a broker, the client request including a desired communication proxy type and a desired application-level protocol;

receiving metadata from the broker regarding a communication proxy if the broker matches the client request within an Internet service registration, the communication proxy having a matching communication proxy type to the desired communication proxy type and a supported protocol of the communication proxy matches the desired application-level protocol specified by the client, the communication proxy provided by a service provider of the desired Internet service;

downloading, by the client, the communication proxy from a location specified by the metadata; and

interacting, by the client, with a web server of the service provider using the downloaded communication proxy to receive the desired Internet service.

18. (Cancelled)

19. (Original) The machine readable medium as in claim 17, wherein interacting is accomplished at runtime.

20. (Original) The machine readable medium as in claim 17, wherein interacting comprises:
dynamic interacting.

21. (Cancelled)

4. Claims 1, 3-4, 6-17, 19-20 are allowed. Claims 1, 6, 13, and 17 are independent claims.

The following is an examiner's statement of reasons for allowance:

With regards to claim 1, the prior art of record, either alone or combined, neither fairly anticipates nor suggests a method within a communications network, comprising, inter alia, as a whole, the steps of a service provider registering an Internet service with a broker, transmitting metadata to the broker describing a communication proxy including at least one supported protocol, a type, and a location of the communication proxy, matching the registered Internet service with a client request to locate a client-

desired Internet service having a client-specified communication proxy type and a client-specified application-level protocol, downloading the communication proxy of the registered Internet service from the location to a node local to a client that issued the client request to the broker; and accessing, by the communication proxy, a web server of the service provider to provide the registered Internet service to the client (see claim 1). The limitations of claim 1 are fully supported by the applicant's disclosure (see at least fig.2).

Regarding the other three independent claims 6, 13 and 17 their limitations and language are very closely parallel to the limitations and language of claim 1 and are therefore analyzed and allowed based upon the same rationale as set forth for claim 1 above.

Dependent claims 3-4, 7-12, 14-16, and 19-20 are also allowed for the same reasons based upon the same rationale as set forth for claim 1 above.

5. Discussion of most relevant prior art:

(i) Slaughter et al. (US Patent 6,950,875), cited as a prior art in rejecting claims 1-20 in the previous office action mailed on 2/20/2007, teaches providing a service interface that may interact with clients of the service to obtain all information to run a service and then either display results of running the service or return information regarding the location of results (see Abstract) and further discloses that a client may look up an advertisement that is used to instantiate a gate that allows the client to run a service by sending and receiving XML messages to and from the

service (see col.14, lines 48-51) but it does not teach a client requesting a desired Internet service to a broker specifying a desired communication proxy type and a desired application-level protocol, the broker matching the client request with a communication proxy provided by a service provider that registered the desired Internet service with the broker, downloading, by the client, the communication proxy from a location specified by metadata provided by the service provider and interacting with a web server of the service provider using the downloaded communication proxy to receive the desired Internet service.

Applicant's arguments filed on 5/9/2007, see remarks pages 6-8 are compelling and persuasive that Slaughter does not fairly anticipate or suggest his above underlined limitations recited in claim 1.

(ii) Graham (US Patent 6,594,700), cited as a prior art in rejecting claims 1-21 in the previous office action mailed on 11/20/2004, teaches a method for implementing a universal service broker interchange (USBIM) (see Fig.4 and col.6, line 1-col7, line 39) for brokering service advertisements receiving a service advertisement in a service provider protocol, transforming the service advertisement from the service provider protocol to an intermediate protocol by service provider protocol adapter servlets (406), storing the service advertisement in a registry using the intermediate protocol, receiving a service request in a requester client protocol, transforming the service request from the requester protocol to the intermediate protocol by client protocol adapter servlets (404), looking up service advertisements corresponding to the service request using the

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intermediate protocol, converting the service advertisement from the intermediate protocol to the requester client protocol and transferring the service advertisement in the requester client protocol. Graham does not teach a client requesting a desired Internet service to a broker specifying a desired communication proxy type and a desired application-level protocol, the broker matching the client request with a communication proxy provided by a service provider that registered the desired Internet service with the broker, downloading, by the client, the communication proxy from a location specified by metadata provided by the service provider and interacting with a web server of the service provider using the downloaded communication proxy to receive the desired Internet service.

Applicant's arguments filed on 12/11/2006, see remarks pages 6-10 are compelling and persuasive that Graham does not fairly anticipate or suggest his above underlined limitations recited in claim 1.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(i) Connor (US PG-PUB 2002/0087714A1, see at least paragraph 0034) discloses a client downloading a proxy object from a remote server to access a service available at the remote server.

(ii) Ims (US Patent 6,542,908, see at least Abstract and col.8, lines 7-34) discloses generating proxy on demand in order to access a remotely located component. The downloaded proxy executes on the client machine enabling the client to access the remote component on the server as if the remote component was locally available.

(iii) Houlding (US Patent 6,735, 7713, see at least Abstract and col.3 line 61-col4, line 8) discloses a client sending a request to an ORB 114 (Object Request Broker) which finds CORBA (server) object 110 corresponding to the request to prepare the CORBA (server) object 110 to receive the request and forward the data making up the request.

(iv) Greene et al. (US Patent 6,922,685, see at least Abstract and col.34, lines 9-24 disclose downloading a smart proxy in response to a client's request for a service and the downloaded smart proxy provide means to the client to execute the service locally or interact with the requested service.

(v) Gupta et al. (US Publication 2005/0021759A1, see at least paragraphs 0031 and 0133) discloses a method for distributing a code from a remote application server to a local server such that a request handler in the local server satisfies a client's request if the requested information is available on the local server and if the requested information is not available on the local server it accesses the remote

application server to obtain the requested information and caches it and the request handler forwards it to the client. If the information from the remote application server cannot be transferred to the local server the request handler on the local server establishes a remote proxy on the local server which forwards the request from the client to the remote application server and a response from the remote server to the client.

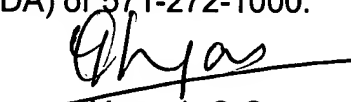
(vi) Waldo, Jim, " The Jini Architecture for network-centric computing"; Communications of the ACM v42n7 PP:76-82 Jul 1999 ISSN: 0001-0782; extracted from Dialog on 7/5/2007; Dialog File 15:ABI/Inform(R); 01850272 05-01264, teaches (see at least page 4) service provider registering its services with a lookup service for use to other members of Jini federation and upon receipt of a request from a client within the Jini federation a proxy is downloaded to the client application enabling the client to request the desired service

The above cited references do not teach a client requesting a desired Internet service to a broker specifying a desired communication proxy type and a desired application-level protocol, the broker matching the client request with a communication proxy provided by a service provider that registered the desired Internet service with the broker, downloading, by the client, the communication proxy from a location specified by metadata provided by the service provider and interacting with a web server of the service provider using the downloaded communication proxy to receive the desired Internet service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh C. Garg whose telephone number is 571-272-6756. The examiner can normally be reached on Increased Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Smith can be reached on 571-272-6763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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Primary Examiner
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YCG
7/19/2007